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## PATENT COOPERATION TREATY

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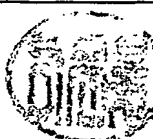
## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference O/PAPCT174	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/KR2004/001821</b>	International filing date( <i>day/month/year</i> ) <b>22 JULY 2004 (22.07.2004)</b>	Priority date ( <i>day/month/year</i> ) 28 JULY 2003 (28.07.2003)	
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 F16L 21/06</b>			
Applicant  <b>KIM, Su gen</b>			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand  <b>05 OCTOBER 2004 (05.10.2004)</b>	Date of completion of this report  27 OCTOBER 2005 (27.10.2005)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  LEE, Moon Wook  Telephone No. 82-42-481-5420 

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/001821

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☒ This report is based on translations from the original language into the following language English which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☒ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/KR2004/001821

## Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1 - 12	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 12	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 12	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1: US 6,450,551 B1 (Sep. 17, 2002)

D2: EP 0987484 A2 (Aug. 12, 1999)

D3: KP 20-0277297 U (Jun. 01, 2002)

Claim 1 of the present application relates to a pipe joint device comprising: flanges having at least one ring groove around an outer circumferential surface thereof; a packing having inner rings around an inner circumferential surface thereof to closely engage with the ring grooves of the flanges; and a clamp having a packing seat and a support sidewall and being divided into a plurality of clamp parts so that the clamp parts are placed around the packing.

D1 discloses a coupling structure for coupling nonferrous metal pipes, comprising iron socket component members (10, 10a) having two grooves (11, 12) at the inner circumferential surfaces thereof; a nonferrous metal layer (14) having a face matching with the inner face of a resin layer (15); a sealing ring (3a); and a packing (3) inserted into the inner portion of the socket members.

D2 discloses a pipe coupler for connecting pipes together, comprising cylindrical sockets (9, 9a), each socket including a pocket (11); a packing (12) inserted into the pocket; and a body (10) having a binding groove (13) formed therein.

D3 discloses a pipe coupler comprising packings (10, 10') inserted between pipes (1, 1'); fixing rings (3, 3') having fixing prominences (5, 5') therein to be put together with depressions (2, 2') which are formed at an outer surface of the pipe; and clamps (6, 6') placed around and connected to the fixing rings.

(Continued on Supplemental Sheet.)

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

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**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**

Continuation of:

Box V.

The following are comparisons between said claim 1 and said documents D1-D3: claim 1 differs from D1 and D3 in that D1 and D2 do not disclose flanges having ring grooves at outer circumferential surfaces thereof, and differs from D2 in that D2 does not disclose the features of claim 1 including a clamp. In addition, said features of the present invention would not be obvious to a person skilled in the art.

Therefore, the subject matter of claim 1 and claims 2-12 which are dependent on claim 1 is considered to be novel, to involve an inventive step, and to be industrially applicable under PCT Article 33(2)-33(4).